

## **Puget Sound Georgia Basin Shoreline Management Planning**

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The Puget Sound Georgia Basin shoreline represents a limited resource yet is a resource in high demand for a multitude of human uses. Management of our Puget Sound Georgia Basin shorelines has become increasingly complex given the tangled web of regulatory authorities from Federal, Tribal, State and Provincial Governments down to municipal governments. Increasing population and associated economic growth in the region has contributed to environmental degradation along our coastal shorelines and will continue to increase the strain on the limited and sensitive coastal shoreline zones. Shoreline management planning will become increasingly an important tool to ensure the public resources including wildlife habitats and recreational uses are protected and used wisely for future generations and long term sustainability. Common planning elements in current plans are responding to increasing pressure from point and non-point pollution, invasive species, increasing demand for aquaculture, increasing pleasure boat use and other shipping traffic, and most importantly, increasing demand for coastal development and in some cases restoration.

This extended abstract presents an overview of current shoreline management planning regulations and how the various shoreline jurisdictional and regulatory programs directed at managing shoreline development work within Washington State.

Shoreline management planning is becoming a more common planning tool to control development and limit disturbances to key physical and biological processes that are unique to the shoreline zone. Effective land use and pollution controls can reduce total pollution loading and such controls can be applied to shoreline management. Shoreline management plans in marine and fresh water environments have been found to help reduce the rate of undesirable shoreline alterations, help limit erosion and vegetation removal along shorelines, and provide tools for better stewardship by shorefront users and owners.

There are a variety of “stress factors” or indicators that one can look at to see the magnitude of the problem our region faces with regard to continued marine water pollution loading and continued habitat degradation along shorelines and in nearshore watersheds. One indicator of ongoing and future stressors is found in our region’s population forecasts. Currently it is estimated there are over 7 million people living in the Puget Sound Georgia Basin and by 2020 it is expected that two million more will move into the area (Georgia Basin-Puget Sound Ecosystem Indicators Report). Population growth brings about a commensurate growth in the regions’ infrastructure, increases in impervious surfaces and continued conversion of forest and agricultural lands to more urban and suburban uses. Runoff from all of these changes can lead to more stress on Puget Sound Georgia Basin marine waters and the habitats they support. Another indicator of pressures on the marine ecosystem is found in statistics regarding the degree of shoreline alterations. Currently it is estimated that over 33 percent of the 2,500 mile

Puget Sound shoreline is hardened by shoreline armoring (Washington Department of Ecology; Shoreline Salmon & Shorelines: Habitat Loss, undated).

Shoreline management across a diverse landscape like that found in Puget Sound Georgia Basin is accomplished through its recognition and ability to accommodate the wide variety of uses, needs, and shoreline ownership interests that currently exist. There are 28 U.S. recognized tribes with shorefront lands on Puget Sound. There are 28 public port districts and major Federal military reservations such as Fort Lewis and naval bases at Bangor, Bremerton, Everett, and Whidbey Island. Additionally there are over 100 sewage treatment plants that have unique waterfront shoreline needs. Of Washington State's estimated 350 recreational marinas, over 80 percent are found on Puget Sound (Puget Sound Action Team, 2002). All of these uses have special needs that add to the complexity of building effective comprehensive shoreline planning regulations.

Currently shoreline planning in Washington state is undertaken within a tangled web of Federal, State and local regulations. On the Federal side, the Coastal Zone Management Act of 1972 provides the primary foundation. Within the Federal context the Endangered Species Act and Marine Mammals Protection Act are key laws since there are several listed species under each Act within Puget Sound waters. Puget Sound is included in the National Estuary Program under Section 320 of the Clean Water Act. Within Washington State, the Shorelines Management Act of 1971 provides the basis for shoreline management but also necessary for consideration are the Growth Management Act, the Salmon Act, the Watershed Planning Act and others.

Washington's State Shoreline Management Act is administered by the Department of Ecology. The Shoreline Management Act serves as the primary basis for Washington's Federally-approved Coastal Zone Management Program (CZM program). Under the Coastal Zone Management Act, all Federal permitted actions (i.e. Corps of Engineer's administered Section 404 (CWA) or Section 10 Rivers and Harbors Act permits) must be determined to be consistent with Washington's CZM program. Of additional note is that under Section 304(a) of the Coastal Zone Management Act, Federal lands, or lands held in trust by the Federal Government are excluded from the state's coastal zone plan, at least with respect to direct federal activities (Washington Department of Ecology, 2001).

Within Washington State, the Shoreline Management Act is administered locally at the county and city level through the adoption of state-approved Shoreline Master Programs. Shoreline Master Programs (SMPs) become elements of County or City comprehensive plans and include goals, policies, and regulations that lead to prescriptive environmental shoreline designations that regulate uses and condition development. In the last two decades SMPs have focused on conditioning development to adhere to the authorized and preferred uses under each SMP. However, in 2003 the Department of Ecology issued new guidelines that require updates to SMPs so that they can be more consistent with the more recent policies and regulations including the Growth Management Act and local "Critical Areas Ordinances". Importantly, they also will be updated to include shoreline restoration needs and a mandate for preservation of ecological and physical processes.

The new guidelines will be used by counties and cities to update their SMPs over the next 11 years. The new guidelines include:

- a mandate that SMP's be centered on foundation of "no net loss of ecological functions necessary to sustain shoreline natural resources",
- a requirement for jurisdictions to perform an assessment of ecological functions of the shorelines,
- a requirement to perform a cumulative effects analysis using comprehensive plans (build out scenarios, etc) to better understand future ecological functional losses, and
- a requirement that restoration of degraded ecological functions be accomplished through comprehensive planning.

This new generation of SMPs offer great hope that restoration planning will now be incorporated into each jurisdictions planning process and that should greatly assist all parties involved in future restoration of Puget Sound shorelines.

#### References and further information:

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